

PATENT  
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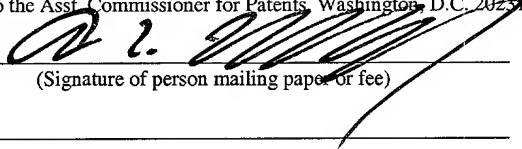
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Klaus Ruppert et al.  
U.S. Serial No. : Unknown  
Int'l. Ser. No. : PCT/EP01/04035  
Filed : 9 April 2001  
Priority date : 14 April 2000  
Title : METHOD AND DEVICE FOR PRODUCING A  
QUARTZ GLASS BODY

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(Signature of person mailing paper or fee)

Assistant Commissioner for Patents  
Washington, D.C. 20231

Attn: Box PCT

PRELIMINARY AMENDMENT

Sir:

Please amend the above application as follows:

IN THE CLAIMS

Please cancel claims 1 to 10 without prejudice and add the following new claims:

11. A method for manufacture of a quartz glass body, said method comprising:

feeding glass starting material and fuel gas to a rotationally symmetrical deposition burner  
having a plurality of annular gap nozzles and being formed by coaxial arrangement of a plurality of

quartz glass tubes about a longitudinal axis, said glass starting material forming in a burner flame  $\text{SiO}_2$  particles which, under back and forward motion of the deposition burner along a longitudinal axis of a rotating mandrel, are deposited on such rotating mandrel so as to form an essentially cylindrical porous blank;

the annular gap nozzles of the deposition burner having gap widths with a maximum dimensional deviation of 0.1 mm;

the deposition burner being co-axially encompassed and aligned to a given direction by means of an aligning device gripping an outer surface thereof, and

the aligning device being connected with a shifting device which selectively locates the aligning device in a selected one of a plurality of positions in a horizontal plane.

12. A method according to Claim 11, wherein the aligning device has at least two spaced holder elements each having a respective flexible coaxial ring associated therewith.

13. A method according to Claim 11, wherein the dimensional deviation of the annular gap nozzles is determined from the results obtained by measuring the co-axial arrangement of the quartz glass tubes at ends thereof by means of a profile projector.

14. A method according to Claim 12, wherein the dimensional deviation of the annular gap nozzles is determined from the results obtained by measuring the co-axial arrangement of the quartz glass tubes at ends thereof by means of a profile projector.

15. A method according to Claim 11, wherein the quartz glass tubes are polished at ends thereof and then smoothed by chemical etching.

16. A method according to Claim 11, wherein the deposition burner is aligned vertically by means of the aligning device.

17. A method according to Claim 16, wherein the deposition burner is positioned below the mandrel by means of the shifting device so that the longitudinal axis of the deposition burner intersects the longitudinal axis of the mandrel.

18. A device for manufacture of a quartz glass body, said device comprising:

a rotationally symmetrical deposition burner formed by coaxial arrangement of a multitude of quartz glass tubes and having several annular gap nozzles, said burner being connected with a holder element;

the annular gap nozzles having a gap width with a maximum dimensional deviation of 0.1 mm;

the holder element acting as an aligning device that coaxially encompasses the outer surface of the deposition burner and swivels around a first swiveling axis and a second swiveling axis, and said holder element being connected with a horizontally movable shifting device.

19. A method according to Claim 18, wherein the aligning device has at least two spaced holder elements each having a respective flexible coaxial ring.

20. A method according to Claim 18, wherein the quartz glass tubes are polished at ends thereof and smoothed by chemical etching.

21. A method according to Claim 19, wherein the quartz glass tubes are polished at ends thereof and smoothed by chemical etching.

22. A method according to Claim 18, wherein the quartz glass tubes have ends, and each end of the quartz glass tubes facing a burner flame intersects the longitudinal axis of the tube at a right angle.

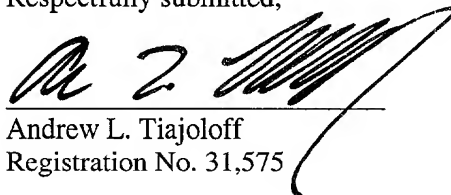
REMARKS

New claims are here presented in a more conventional U.S. claim format, and to eliminate multiple dependency. Early allowance is respectfully requested.

Applicant also submits herewith a PTO 1449 listing the references cited in the International Search Report, as well as listing and providing a copy of the German reference discussed in the application.

Should any questions arise, the Examiner is invited to telephone attorney for applicants at 212-682-9640.

Respectfully submitted,

  
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